Amendments to the Claims:

Please cancel claims 1 to 7 as presented in the underlying International Application No. PCT/EP2004/002330.

Please add new claims 8 to 19 as indicated in the listing of claims below.

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1 to 7 (canceled).

Claim 8 (new): A membrane for a fuel cell which comprises:
at least one porous, non-ion-conducting material; and
at least one ion-conducting electrolyte arranged and configured to fill the pores of the at least one porous, non-ion-conducting material;
the at least one ion-conducting electrolyte comprising a polymeric electrolyte having a characteristic selected from the group consisting of a higher melting point and a higher decomposition point relative to the melting point or decomposition point of the porous, non-ion-conducting material.

Claim 9 (new): The membrane of claim 8, wherein the polymeric, ion-conducting electrolyte has a characteristic selected from the group consisting of a higher melting point and a higher decomposition point, which is at least 15°C higher than the porous, non-ion-conducting material.

Claim 10 (new): The membrane of claim 9, wherein the polymeric, ion-conducting electrolyte has a characteristic selected from the group consisting of a higher melting point and a higher decomposition point, which is at least 20 to 80°C higher than the porous, non-ion-conducting material.

Claim 11 (new): The membrane of claim 8, wherein the porous, non-ion-conducting material

has a melting point in the range from 125 to 250°C.

Claim 12 (new): The membrane of claim 11, wherein the porous, non-ion-conducting material has a melting point in the range from 130 to 180°C.

Claim 13 (new): The membrane of claim 8, wherein the porous, non-ion-conducting material comprises an organic polymer.

Claim 14 (new): The membrane of claim 13, wherein the porous, non-ion-conducting material comprises a thermoplastic selected from the group consisting of a polyolefin, polystyrene, polyvinylidene fluoride, polysulfone, polyvinyl chloride, polyvinyl fluoride, polyamide, polyethylene terephthalate, polyoxymethylene, polycarbonate and mixtures, copolymers and combinations thereof.

Claim 15 (new): The membrane of claim 8, wherein the polymeric, ion-conducting electrolyte substantially comprises an ionomer selected from the group consisting of sulfonic acid, phosphonic acid, carboxylic acid groups, polyperfluorocarbosulfonic acid, sulfonated polyethylene oxide, polybenzimidazole/phosphoric acid blend, sulfonated polysulfone, sulfonated polyether sulfone, sulfonated polystyrene, sulfonated perfluorovinylene ether, sulfonated polyether ketone, sulfonated polyolefin and mixtures and copolymers thereof.

Claim 16 (new): The membrane of claim 8, wherein the porous, non-ion-conducting material comprises a layered structure.

Claim 17 (new): The membrane of claim 16 wherein the layered structure comprises three layers.

Claim 18 (new): A method for using an automatically sealing membrane, comprising the steps of :

providing a membrane comprising: at least one porous, non-ion-conducting material; and at least one ion-conducting electrolyte arranged and configured to fill the pores of the at least one

porous, non-ion-conducting material;

the at least one ion-conducting electrolyte comprising a polymeric electrolyte having a characteristic selected from the group consisting of a higher melting point and a higher decomposition point relative to the melting point or decomposition point of the porous, non-ion-conducting material; and

using the membrane provided in the previous step in a membrane electrode assembly (MEA) for electrochemical cells.

Claim 19 (new): The method of claim 18, wherein the MEA comprises a fuel cell.